

### Abstract of the Disclosure

A fuel processing system and method for processing fuel for a fuel cell having a first adsorbent bed for adsorption of high molecular weight organic sulfur-containing compounds and inorganic sulfur-containing compounds, and a second adsorbent bed for adsorption of low molecular weight organic sulfur-containing compounds, where the adsorbent beds are arranged such that the fuel to be processed passes through one of the adsorbent beds and, thereafter through the other adsorbent bed.